

Title (en)  
FLAT-PANEL DISPLAY USING TAPERED WAVEGUIDE

Title (de)  
FLACHBILDSCHIRM MIT SICH VERJÜNGENDEN WELLENLEITERN

Title (fr)  
UNITE D'AFFICHAGE A PANNEAU PLAT UTILISANT UN GUIDE D'ONDES CUNEIFORME

Publication  
**EP 1417843 B1 20051214 (EN)**

Application  
**EP 02745694 A 20020801**

Priority  
• GB 0203578 W 20020801  
• GB 0118866 A 20010802

Abstract (en)  
[origin: WO03013151A2] A tapered-waveguide display apparatus includes an input waveguide (2) in the form of a slab, into one end of which light can be injected from a projector (6) so that it bounces along the waveguide and exits at the other end, and a tapered output waveguide (1) adapted to receive light from the input waveguide at its blunt end, that then bounces at ever steeper angles until it reaches the critical angle, at which point it is emitted from the face of the taper. In order to eliminate dark gaps in the display the tapered waveguide's thickness profile is varied so that light bounces the same number of times in total before leaving the tapered waveguide.

IPC 1-7  
**H04N 9/31**; **H04N 5/74**

IPC 8 full level  
**G02F 1/13357** (2006.01); **F21V 8/00** (2006.01); **G03B 21/00** (2006.01); **G09F 9/00** (2006.01); **G09F 13/00** (2006.01); **G09F 13/18** (2006.01); **H04N 5/74** (2006.01)

CPC (source: EP KR US)  
**G02B 6/0046** (2013.01 - EP US); **G02F 1/025** (2013.01 - KR); **H04N 9/3141** (2013.01 - EP US); **Y10S 385/901** (2013.01 - EP US)

Designated contracting state (EPC)  
DE FR GB NL

DOCDB simple family (publication)  
**WO 03013151 A2 20030213**; **WO 03013151 A3 20031218**; AU 2002317406 A1 20030217; CN 1330189 C 20070801; CN 1539245 A 20041020; DE 60208049 D1 20060119; DE 60208049 T2 20060803; EP 1417843 A2 20040512; EP 1417843 B1 20051214; GB 0118866 D0 20010926; JP 2004537766 A 20041216; JP 4291141 B2 20090708; KR 100871521 B1 20081205; KR 20040035697 A 20040429; TW I222536 B 20041021; US 2004196665 A1 20041007; US 7410286 B2 20080812

DOCDB simple family (application)  
**GB 0203578 W 20020801**; AU 2002317406 A 20020801; CN 02815227 A 20020801; DE 60208049 T 20020801; EP 02745694 A 20020801; GB 0118866 A 20010802; JP 2003518193 A 20020801; KR 20047001271 A 20020801; TW 91116924 A 20020729; US 48588804 A 20040202